CITY OF SANTA BARBARA

COUNCIL AGENDA REPORT

AGENDA DATE: September 25, 2007

TO: Mayor and Councilmembers

FROM: Water Resources Division, Public Works Department

SUBJECT: Presentation On The Advanced Treatment Technologies Pilot Testing For William B. Cater Water Treatment Plant

RECOMMENDATION:

That Council receive a presentation from staff highlighting the findings of a pilot study that evaluated various advanced treatment technologies at the William B. Cater Water Treatment Plant (Cater) for effectiveness in complying with upcoming water quality regulations.

DISCUSSION:

Background

The City of Santa Barbara (City) owns and operates Cater, which provides drinking water to Santa Barbara, Montecito, and Carpinteria. As part of the treatment process, chlorine is added to the water to kill bacteria and other disease causing agents. Chlorine also binds with naturally occurring organic material in the water. The reaction forms compounds referred to as disinfection by-products (DBPs). The United States Environmental Protection Agency (EPA) suspects DBPs may cause cancer in humans, if consumed at high doses over a lifetime. To limit the risk of cancer, the EPA has issued the DBP Rule, which restricts the allowable concentration of DBPs, specifically trihalomethanes and haloacetic acids, in drinking water.

The DBP Rule is being implemented in two stages. The Stage 1 DBP Rule became effective in 2002, when the City made changes to its water system for compliance. The Stage 2 DBP Rule will become effective in July 2010. For compliance with this stage, the City will have to alter the water treatment process at Cater.

REVIEWED BY: _____Finance _____Attorney

Agenda Item No._____

Pilot Study

On December 6, 2005, Council authorized the execution of a $593,000 contract with Carollo Engineers to conduct a pilot study at Cater to investigate several advanced water treatment technologies. The primary goal of the 1.5 year long study was to determine the treatment technology that would best meet the City's needs for compliance with the upcoming Stage 2 DBP Rule. The study specifically investigated options for reducing trihalomethanes and haloacetic acids in treated water. A secondary goal of the study was to evaluate the ability of these technologies to improve the taste and odor of Cater's treated water.

Findings

The results of the study show that ozonation and chloramination are two treatment technologies that would enable Cater to comply with the Stage 2 DBP Rule. Both technologies would require significant capital improvements at Cater, and each would have varying impacts on individual water systems. Based on information now available, staff believes ozonation is a better alternative because it is a superior disinfectant and significantly improves the taste of water treated at Cater. The Montecito and Carpinteria Valley Water Districts, under a joint powers agreement, will provide 39% of the funding for capital improvements at Cater. Staff will work with representatives of both water districts to evaluate community-specific issues, and will return to Council with a recommendation for authorization of a design contract for the project found most acceptable to all South Coast communities.

PREPARED BY: Catherine Taylor/CT/mh

SUBMITTED BY: Anthony J. Nisich, Public Works Director

APPROVED BY: City Administrator's Office